REMARKS

Applicants again wish to thank the Examiner for the courtesy of conducting a telephone interview with applicants' representative on December 16, 2002.

On page 1 of the Advisory Action and on page 10 of the Official Action, the Examiner states the feature of identifying the molecular distinctiveness prior to the phenotypic evaluation are not recited in the amended claims. Claims 6, 12 and 13 have been amended to add the step of growing plantlets in an *in vitro* system. This step precedes screening the plantlets for molecular variation of somaclones.

Support for this amendment is found *inter alia*, in the last 2 lines on page 3; lines 15-21 on page 6; and lines 1-21on page 18 of the specification.

The Examiner maintains the rejection of claims 6-7 and 10-13 under 35 U.S.C. 103 (a) over Sondahl et al. (U.S. Patent 5,436,395) (July 25, 1995) in view of Gilbert et al. (U.S. Patent 6,187,999 B1) (February 13, 2001) further in view of Jones et al. (Journal of Economic Entomology, (1979), Vol. 72, pages 628-632).

Claims 6-8 and 10-13 are rejected under 35 U.S.C. 103 (a) over Sondahl et al. (U.S. Patent 5,436,395) (July 25, 1995) in view of Gilbert et al (U.S. Patent 6,187,999 B1) (February 13, 2001) further in view of Jones et al. (Journal of Economic Entomology, (1979), Vo. 72, pages 628-632) further in view of Kumar et al. (U.S. Patent Plant 5,898,001) (April 27, 1999).

Applicants respectfully traverse these rejections.

The differences between the method of Sondahl and the claimed method are described below:

Sondahl:

1) Generate 3000 plantlets (somaclones as referred by Sondahl et al but only tissue culture raised plants according to applicants' method which may have some somaclonal variants) in tissue culture.

2) Acclimatize in glass house for 1 month.

3) Go for sucker production in the field for 4 months in 10mX 5m plots with line spacing of 1m in a total area of 15000 square meter.

4) Plant in the field (Spacing 80 cm X 80 cm) (Plant in plots as required for screening experiments 2.5mX2.5m plots for each plant, a total of 2 hectare approximately) and cover the whole area with nets for preventing any other insect coming in and more importantly preventing the insect escape from inside.

5) After 2 months of planting the insect larvae more than 30,000 approximately (this minimum number will be required for this population size of plants) to be released.

6) Insect bites to be recorded in all the plants and 1435 plants finally achieve maturity and rest of the plants show different degree of damage.

7) Same experiment to be repeated in the next year with 1435 plants and again 538 plants survive.

8) To reach the insect tolerance plant it may take several years and then yield trials to determine the herbage yield and quality in additional years.

The disadvantages of the Sondahl process include:

1) After two years of experimentation, following the procedure of Sondahl applicants still are not able to determine the insect tolerance in *Mentha arvensis*. It may take another few years to be able to identify one or two plants which may be insect tolerant. All of the plantlets generated through somatic embryogenesis have to be screened in the field.

2) Land is used every year which could otherwise be used for other purposes.

3) There is also a labor requirement for planting, intercultural operations etc. and one must take note of the logistics and costs for preparation of huge nets to prevent the release of insects to the environment and to prevent new insects from coming into contact with the plants. The nets must also be guarded from wind and other environmental factors which could damage the net.

In contrast, an example of applicants' method consists of:

1) 3000 regenerated clones in tissue culture.
2) DNA isolation and RAPD analysis from 40 mg tissue.
3) 245 clones showed variation at DNA level in the RAPD profiles compared to the control plant.
4) 245 plantlets fed to larvae ($3^{rd}/4^{th}$ instar) in the culture tube itself (Force feeding).
5) Three plants tolerant to the insect.
6) Total time required to reach this stage is 3 months.
7) Initial Field trial for insect tolerance and yield (maximum land requirement 100 m^2), Net to cover only 100 m^2 land.

Only 245 plans with confirmed changes were checked for insect tolerance not all 3000, thereby saving time, expense and labor.

A terminal disclaimer over U.S. Patent 5,898,001 is attached.

Therefore, given the significant differences between the claimed invention and the process of the primary reference Sondahl (U.S. Patent 5,436,395) it is clear that none of the cited references alone or in combination teach or suggest the claimed method and the advantages of the claimed method. It is respectfully requested that these rejections be withdrawn.

Applicants submit that the present application is in condition for allowance and favorable consideration is respectfully requested.

Respectfully submitted

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In the Claims

Please amend claims 6, 12 and 13.

Claim 6 (Amended). An *in vitro* screening method for identifying insect tolerant genotypes or clones, said method comprising the steps of:

a) growing plantlets in an *in vitro* system;

b) [a) detecting] screening the plantlets for molecular variation of somaclones using RAPD analysis *in vitro*;

c) [b)] selecting the somaclones having molecular variation;

d) [c)] exposing the somaclones of step [b)] c) to insect larva or nymphs; and

e) [d)] identifying the surviving somaclones.

Claim 12 (Amended). An *in vitro* screening method for identifying insect tolerant genotypes or clones, said method comprising the steps of:

a) growing plantlets in an *in vitro* system;

b) [a) detecting] screening the plantlets for molecular variation of somaclones using RAPD analysis *in vitro*;

c) [b)] selecting the somaclones having molecular variation;

d) [c)] exposing the somaclones of step [b)] c) to insect larvae or nymphs;

e) [d)] identifying the surviving somaclones; and

f) [e)] growing the surviving somaclones into adult plants.

Claim 13 (Amended). An *in vitro* screening method for identifying insect tolerant genotypes or clones, said method comprising the steps of:

a) growing plantlets in an *in vitro* system;

b [a) detecting] screening the plantlets for molecular variation of somaclones of *Mentha arvensis* using RAPD analysis *in vitro*;

c) [b)] selecting the somaclones of *Mentha arvensis* having molecular variation;

d) [c)] exposing the somaclones of step [b)] c) to insect larvae or nymphs;

e) [d)] identifying the surviving somaclones of *Mentha arvensis*; and

f) [e)] growing the surviving somaclones into adult *Mentha arvensis* plants.